

10 Rec'd PTO 27 FEB 2002

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TRADEMARK OFFICE
(REV 11-2000)

U.S. DEPARTMENT OF COMMERCE PATENT AND

ATTORNEY'S DOCKET NUMBER

**TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. § 371**

449122021700

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

10/069621
Not yet assigned

INTERNATIONAL APPLICATION NO.

INTERNATIONAL FILING DATE

PRIORITY DATE CLAIMED

PCT/DE00/01546

May 16, 2000

August 27, 1999

TITLE OF INVENTION

TELECOMMUNICATIONS TERMINAL

APPLICANT(S) FOR DO/EO/US

Albrecht GOECKE et al.

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

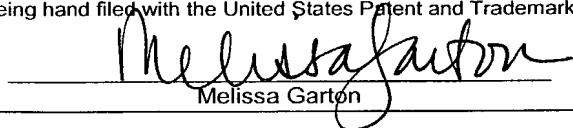
1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☐ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.
4. ☒ The US has been elected by the expiration of 19 months from the priority date (PCT Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. ☒ is attached hereto (required only if not communicated by the International Bureau)
 - b. ☒ has been communicated by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ An English language translation of the International Application under PCT Article 19 (35 U.S.C. 371(c)(2)).
 - a. ☒ is attached hereto.
 - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)).
 - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
 - b. ☐ have been communicated by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☐ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

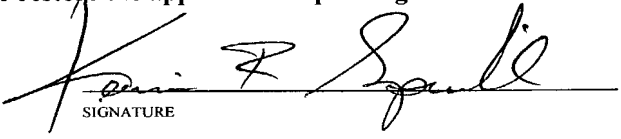
Items 11. to 16. below concern document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☐ A **FIRST** preliminary amendment.
14. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
15. ☐ A substitute specification
16. ☐ A change of power of attorney and/or address letter.
17. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.
18. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
19. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
20. ☒ Other items: 1) Application Data Sheet; 2) Int'l Search Report; 3) IPER; 4) Return receipt postcard.

CERTIFICATE OF HAND DELIVERY

I hereby certify that this correspondence is being hand filed with the United States Patent and Trademark Office in Washington, D.C. on February 27, 2002.


Melissa Garton

| | | | | | |
|---|--------------|--|------------|--|-----|
| U.S. APPLICATION NO (if known, see 37 CFR 1.5) Not yet assigned 10/069621 | | INTERNATIONAL APPLICATION NO PCT/DE00/01546 | | ATTORNEY DOCKET NO 449122021700 | |
| 21. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492(a)(1)-(5)): Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO.....\$1,040.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO\$890.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO.....\$740.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provision of PCT Article 33(1)-(4)\$710.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4)\$100.00 | | | | CALCULATIONS PTO USE ONLY | |
| ENTER APPROPRIATE BASIC FEE AMOUNT = | | | | \$890.00 | |
| Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)). | | | | \$0 | |
| CLAIMS | NUMBER FILED | NUMBER EXTRA | RATE | | |
| Total claims | - 20 = | | x \$18.00 | \$0 | |
| Independent claims | - 3 = | | x \$84.00 | \$0 | |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable) | | | + \$280.00 | \$0 | |
| TOTAL OF ABOVE CALCULATIONS = | | | | \$890.00 | |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2. | | | | \$0 | |
| SUBTOTAL = | | | | \$890.00 | |
| Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)). | | | | + | \$0 |
| TOTAL NATIONAL FEE = | | | | \$890.00 | |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property | | | | + | \$0 |
| TOTAL FEES ENCLOSED = | | | | \$890.00 | |
| | | | | Amount to be refunded: | \$ |
| | | | | charged: | \$ |
| a. <input checked="" type="checkbox"/> Please charge my Deposit Account No. 03-1952 (referencing Docket No. 449122021700) in the amount of \$890.00 to cover the above fees. A duplicate copy of this sheet is enclosed. | | | | | |
| b. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees that may be required, or credit any overpayment to Deposit Account No. 03-1952 (referencing Docket No. 449122021700). | | | | | |
| NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status. | | | | | |
| SEND ALL CORRESPONDENCE TO: Kevin R. Spivak Morrison & Foerster LLP 2000 Pennsylvania Avenue, N.W. Washington, D.C. 20006-1888 | | | | | |
|  SIGNATURE | | | | Kevin R. Spivak Registration No. 43,148 | |
| February 27, 2002 | | | | | |

Rec'd PCT/PTO 05 JUN 2002

10/069,621 #6
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CERTIFICATE OF HAND DELIVERY

I hereby certify that this correspondence is being hand filed with the United States Patent and Trademark Office in Washington, D.C. on June 5, 2002.

M. Ayim

Mildred I. Ayim

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Albrecht GOECKE et al.

Serial No.: 10/069,621

Filing Date: February 27, 2002

For: TELECOMMUNICATIONS
TERMINAL

Examiner: Not yet assigned

Group Art Unit: Not yet assigned

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination on the merits, please amend this application as follows:

In the Claims:

What is claimed is:

1. (Amended) A telecommunications terminal, comprising:
a memory device to store user-specific data;
an input device having an output connected to the memory device, to input the user-specific data into the memory device;
a transmission device having an input connected to the memory device, to transmit the user-specific data to another subscriber in a telecommunications network, the memory device and the transmission device are configured to store at least one string of digits and to transmit the string while a connection to the other subscriber exists; and
an actuation device to transfer the user-specific data from the memory device to the transmission device while the connection exists, the authentication device protects the user-specific data against unauthorized access; and
the transmission device has a plurality of preconfigured transmission units, and a selection device to select one or more preconfigured transmission devices.

14. The telecommunications terminal as claimed in claim 1, wherein
the input device and/or the memory device are held in a supplementary module,
which is connected via an interface with data capability, for a telephone, having a separate
housing.
15. The telecommunications terminal as claimed in claim 14, wherein
the supplementary module has a digit or alphanumeric keypad or a touch screen.

In the Abstract:

Please replace the Abstract with the substitute Abstract attached hereto.

REMARKS

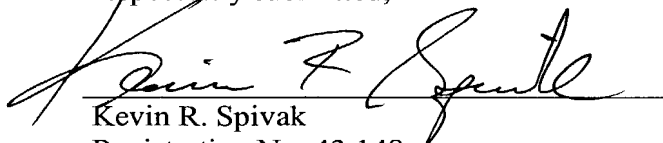
Amendments to the specification have been made and are submitted herewith in the attached Substitute Specification. A clean copy of the specification and a marked-up version showing the changes made are attached herewith. The claims and abstract have been amended in the attached Preliminary Amendment. All amendments have been made to place the application in proper U.S. format and to conform with proper grammatical and idiomatic English. None of the amendments herein are made for reasons related to patentability. No new matter has been added.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made**".

In the event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. 449122021700.

Dated: June 5, 2002

Respectfully submitted,


Kevin R. Spivak
Registration No. 43,148

Morrison & Foerster LLP
2000 Pennsylvania Avenue, N.W.
Washington, D.C. 20006-1888
Telephone: (202) 887-6924
Facsimile: (202) 263-8396

1. A telecommunications terminal(100; 200) ~~having, comprising:~~
a memory device (139; 225) ~~for storing~~ to store user-specific data;
an input device (129; 201), ~~whose~~ having an output is connected to the memory device, ~~for inputting~~ to input the user-specific data into the memory device, ~~and having;~~
a transmission device (119 to 127; 213 to 221), ~~whose input is~~ having an input connected to the memory device, ~~for transmitting~~ to transmit the user-specific data to another subscriber in a telecommunications network,
where the memory device and the transmission device are designed configured to store at least one string of digits and to transmit it the string while a connection to the other subscriber exists; and,
where an actuation means (107; 207) ~~for transferring~~ device to transfer the user-specific data from the memory device to the transmission device while the connection exists, the ~~are also provided,~~ and
where authentication means (133 to 135; 207) ~~for protecting~~ device protects the user-specific data against unauthorized access, and ~~are provided,~~
characterized
in that
the transmission device (119 to 127; 213 to 221) has a plurality of preconfigured transmission means (119 to 127; 213 to 221) which each have a particular associated transmission method, and in that a selection device (107; 207) ~~for selecting~~ units, and a selection device to select one or more preconfigured transmission means (119 to 127; 213 to 221) is provided devices.

~~in that~~ **wherein** the transmission device (119 to 127) has **a** data fax, SMS or USSD transmission means **unit**.

9. The telecommunications terminal as claimed in ~~one of the preceding claims~~ **claim 1**,

characterized

~~in that~~ **wherein** the selection device (107; 207) is produced within the context of **has** menu guidance.

10. The telecommunications terminal as claimed in ~~one of the preceding claims~~ **claim 1**,

characterized

~~in that~~ **wherein** the memory device (139) is ~~in the form of~~ a multi-area memory ~~for to storing~~ **store** a plurality of strings of digits in the memory areas (139i), which can each be accessed using the actuation means **device**.

11. The telecommunications terminal as claimed in ~~one of the preceding claims~~ **claim 1**,

characterized

~~in that~~ **wherein** the transmission device has **an** associated encryption means (141) ~~for~~ **unit to** encrypting **encrypt** the user-specific data before and/or during transmission.

12. The telecommunications terminal as claimed in ~~one of the preceding claims~~ **claim 1**,

characterized by

~~its being in the form of~~ **wherein the terminal is** a mobile telephone (101; 200).

13. The telecommunications terminal as claimed in ~~one of the preceding claims~~ **claim 1**,

characterized

~~in that~~ **wherein** the transmission device is designed **configured** to transmit the user-specific data via an IP network, ~~in particular the Internet~~, and has a web browser, ~~in particular~~.

14. The telecommunications terminal as claimed in ~~one of the preceding claims~~ **claim 1**,

characterized

~~in that~~ **wherein** the input device (129) and/or the memory device (139), ~~in particular both~~, are held in a supplementary module (103), which ~~can be~~ **is** connected via

an interface (105A, 105B) with data capability, for a telephone, ~~in particular a mobile telephone~~, having a separate housing.

15 The telecommunications terminal as claimed in claim 14, **1, wherein**
characterized

~~in that~~ the supplementary module (103) has a digit or alphanumeric keypad (129)
or a touch screen.

In the Abstract:

Please replace the Abstract with the substitute Abstract attached hereto.

Telecommunications terminal

ABSTRACT

Telecommunications terminal having a memory device to store user-specific data, having a transmission device whose input is connected to a memory device, where the memory device and the transmission device are designed to store at least one string of digits and to transmit it while a connection exists, and an authentication device to protect the user-specific data against unauthorized access are provided.

Rec'd PCT/PTO 05 JUN 2002

110059 TO/05973 #7

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**Substitute Specification
(Clean Copy)**

Telecommunications terminal

CLAIM FOR PRIORITY

This application claims priority to International
5 Application No. PCT/DE00/01546 which was published in
the German Language on March 8, 2001.

TECHNICAL FIELD OF INVENTION

The invention relates to a telecommunications terminal
10 having a memory device for storing user specific data.

BACKGROUND OF THE INVENTION

For modern telecommunications terminals (or terminal
configurations which include supplementary components),
15 various options are known for inputting and storing
user-specific data and also for transmitting such data
to another subscriber.

These include, by way of example, telephone answering
20 machines, separate or integrated into a conventional
landline telephone, and in which user-specific
information is stored in a semiconductor memory or on
tape by means of voice input and is transmitted to the
calling subscriber in the event of a call not being
25 taken.

The call number memories in modern landline telephones or mobile telephones (also referred to here as a "telephone book") can also be regarded as memories for user-specific data which are supplied by means of an input from the user and can be accessed by suitable selection means in order to either output a stored call number on a display unit or to set up a connection to this call number directly (or both).

10 A configuration is also produced by the internal storage device, provided to implement the SMS (Short Message Service) or e-mail in mobile telephones, for buffer-storing a short message and for sending it to a desired recipient after input has ended.

15

Although a multiplicity of different storage options for user-specific data are known for modern telecommunications terminals, and in this context it is also known practice to supply such data directly from the respective memory device to a transmission device for transmission to another subscriber, certain instances of application involve complex and also, in terms of reliability and data transmission and the security of the transmitted data against unauthorized access, unsatisfactory actions.

20

25

Thus, in recent years, it has become commonplace to be able to handle a multiplicity of diverse services. For example, to handle the delivery of certain goods, booking a flight, booking a trip or else a financial transaction - via a telecommunications network, with the orderer or purchaser merely giving the number and the validity period of a credit card or customer card or the like to the vendor or supplier by telephone. For this purpose, before the telephone call, or even during it, the user needs to get out the appropriate card or to retrieve the data possibly from an organizer or a database in which he has stored them temporarily, so that he can then inform the subscriber on the other terminal of them by speaking. In loud situations, this type of communication is anything but reliable, which means that misunderstandings with severe consequences may arise. Furthermore, in many instances of application in which the communication is not completely screened from third parties, it is entirely possible for the relevant string of digits to be overheard when submitted audibly and for the credit card number thus to fall into the wrong hands.

Finally, this way of handling credit or customer card numbers is associated with a degree of "fiddling", which is extremely disagreeable to the user, and in

some situations - for example during a car journey - it is not possible at all in practice.

SUMMARY OF THE INVENTION

5 In one embodiment of the invention, there is a telecommunications terminal which allows easier ordering of goods or services via a telecommunications network.

10 In one aspect of the invention, the telecommunications terminal is provided with a device to store at least one string of digits and to transmit it while a connection exists in response to the activation of suitable actuation means by the user. In contrast to a
15 telephone answering machine, for example, for an incoming call, the memory device is not connected as the other caller instead of the actual terminal, but rather that switching it on during a normal terminal connection is controlled by the user.

20

In another aspect of the invention, the memory device, and optionally the transmission device, has an authentication device to protect the sensitive user-specific data (specifically the credit-card or
25 customer-card or account number or the like) against unauthorized access to the memory or to the transmission device.

In one preferred embodiment, the input device comprises digit keys, expediently the digit keypad on a telephone or on a supplementary module for a telephone.

5

In an alternative embodiment, the user-specific data may also be input using the telecommunications terminal's microphone and also a voice memory or voice processing device connected downstream of said
10 microphone.

In either case, implementing the data input requires no change to the familiar user interface on the terminal, and in the case of input using the digit keys requires
15 slight hardware additions inside the equipment. By contrast, voice input naturally requires a higher level of hardware complexity, particularly as compared with a simple landline telephone, but an added-feature mobile telephone already has the fundamental hardware
20 prerequisites for this.

In another preferred embodiment, for which the prerequisites are preferred in a mobile telephone, the input is implemented within the context of special menu
25 guidance. This can be done using a special "Payment Info" (or the like) menu item or section which enables access to the memory device for the credit card number

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or the like after the predetermined authentication data have been input.

Examples of authentication data which can be used are -
 5 a password, a short combination of digits (PIN =
 Personal Identification Number) or else biometric data,
 such as a fingerprint or a voice sample, or data stored
 in a universal Smartcard. According to the chosen
 method of authentication, the authentication device has
 10 suitable input, comparison and storage.

Generally speaking it is easy to implement input,
 storage and evaluation of a PIN in a telecommunications
 terminal. What is somewhat more complex and cannot be
 15 implemented readily in simple landline terminals which
 do not have a keypad which can be switched at least to
 alphanumeric mode is authentication using a password,
 and authentication using biometric data is probably
 more likely to be regarded as a future solution on
 20 account of the relatively high level of hardware and
 software complexity. Besides this, the latter solution
 is known to have the drawback that the access
 authorization is linked absolutely to the presence of
 the biometric features and therefore cannot be
 25 transferred.

Finally, voice transmission is possible and, on account of the hardware prerequisites, can also be implemented with relatively little complexity especially by landline telephones having an integrated telephone answering machine or by mobile telephones having a voice memory. It is also conceivable to convert the numbers which are input into spoken text using a simple voice synthesizer.

Particularly for a mobile radio terminal, but maybe also for added-feature landline terminals (for example a combi fax machine), it is advantageous to preconfigure a number of transmission options for the stored card or account data in order to be able to meet any different requirements of the suppliers in terms of the data transmission. In the case of a mobile radio terminal or a modern added-feature telephone, the relevant selection will again be able to be made most appropriately within the context of menu control.

20

In one embodiment, the memory device for the user-specific data is preferably in the form of a multi-area random access memory so that - in line with the requirements of modern business transactions - a plurality of credit card, customer card or account numbers can be stored in retrievable form. The actuation device is then in the form of a selection

device. This selection device can also - in the case of a mobile telephone at any rate - be implemented most conveniently using menu guidance. In one preferred embodiment, there is a telecommunications terminal has
 5 a device to, transmit the user-specific data to the requester via an IP network, in particular the Internet - for example a preinstalled Internet browser.

The application options for the invention can be
 10 significantly extended in an embodiment in which the input device and/or the memory device and, in particular, both devices are held in a supplementary module having a separate housing for connection to an already existing mobile telephone or other
 15 telecommunications terminal. This is because this allows already existing equipment having an interface with data capability to be retrofitted. Such a supplementary module can naturally also perform further convenience functions extending the performance range
 20 of the existing terminal, and may also be used as a supplementary unit for other technical equipment. Specifically in this case, it also appears expedient to provide authentication means for evaluating biometric data or to fit a SmartCard reader.

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119 via a controller 115, and the microphone 111 and the earphone 113 are connected to the baseband processing stage 119 via an AF stage 117. The input of the baseband processing stage is connected to a
5 reception part 121, and the output of the baseband processing stage is connected to a transmission part 123, both of these parts being connected to an antenna 127 of the mobile telephone 101 via a diplexer 125.

10 The supplementary unit 103 has a separate, alphanumeric keypad 129 and a large-area alphanumeric display unit 131. The supplementary unit 103 also has a card reading and evaluation unit 133 for a SmartCard 134, the card reading and evaluation unit 133 having an associated
15 authentication memory unit 135. An enabling switching stage 137, controlled by the card reading and evaluation unit 123, is connected between the output of the keypad 129 and the input of a card number memory unit 139. The output of the latter is connected to the
20 input of the second infrared interface 105B via an encryption stage 141. In addition, the supplementary unit 103 also has the normal elements for microprocessor control, i.e. a processor/controller, a main memory and a program memory, which interact with
25 the input keypad 129 and the display unit 131 in a manner known per se - this microprocessor control is

(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG

(19) Weltorganisation für geistiges Eigentum
Internationales Büro



(43) Internationales Veröffentlichungsdatum
8. März 2001 (08.03.2001)

PCT

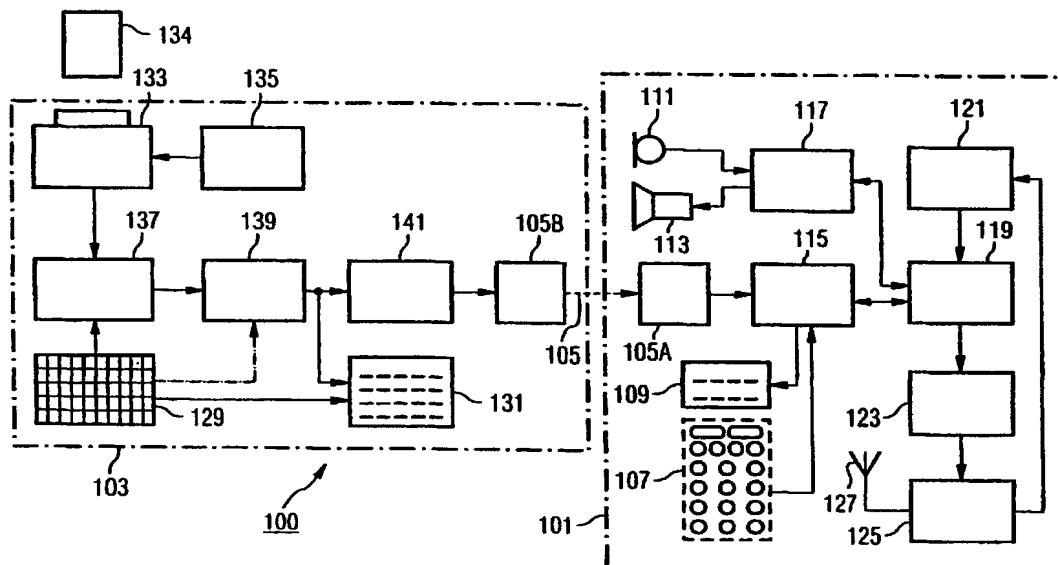
(10) Internationale Veröffentlichungsnummer
WO 01/16897 A1

- | | | | |
|---|--|-------------------------------------|--|
| (51) Internationales Patentklassifikation ⁷ : 19/00, H04Q 7/32 | G07F 7/10, | (72) Erfinder; und | (75) Erfinder/Anmelder (nur für US): GOECKE, Albrecht [DE/DE]; Whistlerweg 13, D-81479 München (DE). MENTZ, Stephan [DE/DE]; Umlandstrasse 27, D-85386 Eching (DE). PRANGE, Stefan [DE/DE]; Forstenrieder Allee 134, D-81476 München (DE). PROHASKA, Bernd [DE/DE]; Brieberg 24, D-93191 Rettenbach (DE). THOMFOHRDE, Heiner [DE/DE]; Fastlinger Ring 200, D-85716 Unterschleissheim (DE). WEGHORST, Ingo [DE/DE]; Gotthelfstrasse 55, D-81677 München (DE). |
| (21) Internationales Aktenzeichen: | PCT/DE00/01546 | | |
| (22) Internationales Anmeldedatum: | 16. Mai 2000 (16.05.2000) | | |
| (25) Einreichungssprache: | Deutsch | | |
| (26) Veröffentlichungssprache: | Deutsch | | |
| (30) Angaben zur Priorität: | 199 40 823.8 27. August 1999 (27.08.1999) DE | (74) Gemeinsamer Vertreter: | SIEMENS AKTIENGESSELLSCHAFT; Postfach 22 16 34, D-80506 München (DE). |
| (71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme von US): SIEMENS AKTIENGESSELLSCHAFT [DE/DE]; Wittelsbacherplatz 2, D-80333 München (DE). | | (81) Bestimmungsstaaten (national): | CN, HU, US. |

[Fortsetzung auf der nächsten Seite]

(54) Title: TELECOMMUNICATIONS TERMINAL

(54) Bezeichnung: TELEKOMMUNIKATIONS-ENDGERÄT



(57) Abstract: The invention relates to a telecommunications terminal (100), comprising a storage device (139) for storing user-specific data and a transmission device (119 to 127) which is connected to a storage device on the input-side. The storage device and the transmission device are configured for storing at least one string of digits and transmitting the same while a connection is being established, and authentication means (133 to 135) for protecting the user-specific data from unauthorised access are provided.

[Fortsetzung auf der nächsten Seite]

WO 01/16897 A1

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JC19 Rec'd PCT/PTO 27 FEB 2002

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Description

Telecommunications terminal

5 The invention relates to a telecommunications terminal in accordance with the precharacterizing clause of claim 1.

10 For modern telecommunications terminals (which are also to be understood below as meaning terminal configurations which include supplementary components), various options are known for inputting and storing user-specific data and also for transmitting such data to another subscriber.

15 These include, by way of example, telephone answering machines, separate or else integrated into a conventional landline telephone, which have been known for a long time and in which user-specific information
20 is stored in a semiconductor memory or on tape by means of voice input and is transmitted to the calling subscriber in the event of a call not being taken.

In a certain sense, the call number memories in modern
25 landline telephones or mobile telephones (also referred to here as a "telephone book") can also be regarded as memories for user-specific data which are supplied by means of an input from the user and can be accessed by suitable selection means in order either to output a
30 stored call number on a display unit or to set up a connection to this call number directly (or both).

In a certain sense, a configuration in accordance with the precharacterizing clause of claim 1 is also
35 produced by the internal storage means,

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Finally, this way of handling credit or customer card numbers is associated with a degree of "fiddling", which is extremely disagreeable to the user, and in some situations - for example during a car journey - it
5 is not possible at all in practice.

The invention is therefore based on the object of specifying an improved telecommunications terminal of the generic type which allows easier ordering of goods
10 or services via a telecommunications network.

This object is achieved by a telecommunications terminal having the features of claim 1.

15 The invention embraces the fundamental concept of providing the telecommunications terminal with means for storing at least one string of digits and for transmitting it while a connection exists in response to the activation of suitable actuation means by the
20 user. In contrast to a telephone answering machine, for example, what is important in this case is that, for an incoming call, the memory device is not connected as the other caller instead of the actual terminal, but rather that switching it on during a normal terminal
25 connection is controlled by the user.

The invention also embraces the concept of allocating the memory device, and optionally also the transmission device, authentication means for protecting the
30 sensitive user-specific data (specifically the credit-card or customer-card or account number or the like) against unauthorized access to the memory or to the transmission device.

35 In one preferred embodiment, the input device comprises digit keys, expediently the digit keypad on a telephone or on a supplementary module for a telephone.

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As an alternative to this, the user-specific data may also be input using the telecommunications terminal's microphone and also a voice memory or voice processing device connected downstream of said microphone.

5

In both cases, implementing the data input requires no change to the familiar user interface on the terminal, and in the case of input using the digit keys also requires only slight hardware additions inside the equipment. By contrast, voice input naturally requires a higher level of hardware complexity, particularly as compared with a simple landline telephone, but an added-feature mobile telephone already has the fundamental hardware prerequisites for this.

15

In another preferred embodiment, for which the prerequisites are likewise best in a mobile telephone, the input is implemented within the context of special menu guidance. This can be done using a special "Payment Info" (or the like) menu item or section which enables access to the memory device for the credit card number or the like after the predetermined authentication data have been input.

25

Examples of authentication data which can be used are - in a selection which is known per se - a password, a short combination of digits (PIN = Personal Identification Number) or else biometric data, such as a fingerprint or a voice sample, or data stored in a universal Smartcard. According to the chosen method of authentication, the authentication means have suitable input, comparison and storage means.

30

Certainly the easiest thing to implement in a telecommunications terminal is the input, storage and evaluation of a PIN. What is somewhat more complex and cannot be implemented readily in simple landline terminals which do not have a keypad which can be switched at least to alphanumeric mode is

35

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authentication using a password, and authentication using biometric data is probably more likely to be regarded as a future solution on account of the relatively high level of hardware and software complexity. Besides this, the latter solution is known to have the drawback that the access authorization is linked absolutely to the presence of the biometric features and therefore cannot be transferred.

The card information retrieved from the memory device can be transmitted in various ways, which each have certain advantages in a particular context. On account of the simplicity and usability for the landline network as well, the dual tone multiple frequency (DTMF) method should certainly be mentioned first in this context, said method having been proven for comparable applications - for example communicating with telephone computers at banks or the like - for years. Transmission using a preconfigured fax or e-mail program is also possible and can naturally be implemented most easily in a terminal already provided with a fax mode.

In line with the mobile radio standards, transmission as "Unstructured Supplementary Service Data" (USSD) or as "Short Message" or, in future, GPRS is also suitable, in particular. Thus, in line with the GSM standard common today, it is possible to send and receive short text messages using the SMS or, in future, e-mail in parallel with a voice connection. The data sent in this way can even be encrypted using the "SIM Application Tool Kit" in order - in addition to the encryption methods in mobile radio technology, which are in high regard anyway - to provide additional security on the transmission path. Naturally, appropriate reception-end decryption is then required.

Finally, voice transmission is possible and, on account of the hardware prerequisites, can also be implemented

with relatively little complexity especially by
landline telephones having an integrated telephone
answering machine or by mobile telephones having a
voice memory. It would also be conceivable to convert
5 the numbers which are input into spoken text using a
simple voice synthesizer.

Particularly for a mobile radio terminal, but maybe
also for added-feature landline terminals (for example
10 a combi fax machine), it is advantageous to
preconfigure a number of transmission options for the
stored card or account data in order to be able to meet
any different requirements of the suppliers in terms of
the data transmission. In the case of a mobile radio
15 terminal or a modern added-feature telephone, the
relevant selection will again be able to be made most
appropriately within the context of menu control.

The memory device for the user-specific data is
20 preferably in the form of a multi-area random access
memory so that - in line with the requirements of
modern business transactions - a plurality of credit
card, customer card or account numbers can be stored in
retrievable form. The actuation device then naturally
25 needs to be in the form of a selection device. This
selection device can also - in the case of a mobile
telephone at any rate - be implemented most
conveniently using menu guidance. Of great relevance
for the future is one preferred embodiment in which the
30 telecommunications terminal has means for transmitting
the user-specific data to the requester via an IP
network, in particular the Internet - for example a
preinstalled Internet browser.

35 The application options for the invention can be
significantly extended in an embodiment in which the
input device and/or the memory device and, in
particular, both devices are held in a supplementary
module having a separate housing for connection to an

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already existing mobile telephone or other telecommunications terminal. This is because this allows already existing equipment having an interface with data capability to be retrofitted. Such a
5 supplementary module can naturally also perform further convenience functions extending the performance range of the existing terminal, and may also be used as a supplementary unit for other technical equipment. Specifically in this case, it also appears expedient to
10 provide authentication means for evaluating biometric data or to fit a SmartCard reader.

Advantages and expediency in the invention can otherwise be found in the subclaims and also in the
15 description below of preferred exemplary embodiments with reference to the figures, in which:

Figure 1 shows a basic illustration to explain a first embodiment in the form of a function block diagram, and
20 Figure 2 shows a basic illustration to explain a second embodiment in the form of a function block diagram.

Figure 1 shows a mobile radio terminal configuration 100 comprising a mobile telephone 101 and a
25 supplementary unit 103. The mobile telephone 101 and the supplementary unit 103 are connected to one another by means of an infrared transmission link 105 comprising a first interface 105A belonging to the mobile telephone 101 and a second interface 105B
30 belonging to the supplementary unit 103.

In terms of hardware, the design of the mobile telephone 101 is known per se. This design comprises an input keypad 107, an LCD display unit 109, a microphone
35 111 and also an earphone 113 as customary input and output means. The input keypad 107 and the LCD display unit 109 are connected to a baseband processing stage 119 via a controller 115, and the microphone 111 and the earphone 113 are connected to the baseband

process, and provision of the required data for the other party to the transaction becomes much more convenient for the user.

5 Figure 2 shows a second embodiment in the form of a mobile telephone 200 drawn schematically as a function block diagram. This mobile telephone 200 also has a basic design which is known per se. This design comprises, in particular, a microphone 201, an earphone 10 203, an LCD display unit 205 and an input keypad 207 as input and output element, of which the microphone 201 and the earphone 203 are connected to an AF stage 209, and the display unit 205 and the input keypad 207 are connected to a controller 211. Both the AF stage 209 15 and the controller 211 are connected to a baseband processing stage 213 whose input is connected to an RF reception part 215 and whose output is connected to a transmission part 217, said parts in turn being connected to an antenna 221 via a diplexer 219. To this 20 extent, the design also corresponds to that of the mobile telephone 101 shown in Figure 1.

In this case, the microphone 201 is also connected via an enabling switching stage 223 to the input of a voice 25 memory unit 225 whose output is in turn connected to the AF stage 209. Both the enabling switching stage 223 and the voice memory unit 225 are also connected to the output of the controller 211 via control signal inputs.

30 The scenario, already mentioned above, of transmitting a credit-card or account number or the like to a supplier of goods or services during an existing mobile radio connection is in this case produced as follows: first, the microphone 201 and the enabling switching 35 stage 223, switched to enable by means of the controller 211, are used to store a string of digits comprising a card number and a validity period in the voice memory stage 225. After actuation of a softkey on the input keypad 207, this string of digits is output

to the AF stage 209 from the voice memory 225 under the control of the controller 211. After appropriate processing in the baseband processing stage 213 and the transmission stage 217, it is transmitted to the terminal associated with the supplier of goods or services. On this case, authentication takes place by virtue of an additional PIN or a password being input using the input keypad 207. The voice memory stage 225 used can be a voice memory unit already provided per se in mobile telephones today; alternatively, an additional unit can be provided specifically for storing the card information as voice information.

The implementation of the invention is not limited to the examples described above, but rather is also possible in a multiplicity of modifications lying within the scope of action of a person skilled in the art. It is thus also possible in the case of a landline telephone, in particular, and in this case too the components provided for inputting, storing and transmitting the card data may be provided either in a telephone - equipped with appropriate added features - itself or in a supplementary unit connected thereto. If a voice input unit is provided (as in the case of the embodiment in Figure 2), this can also be connected to a downstream voice/text conversion unit and to means for transmitting the data which have been input in the form of voice information in text format.

Instead of an infrared link between the actual terminal and a supplementary unit, a line-conducted connection or else, in future, a special radio connection (Bluetooth) may also be provided.

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9. The telecommunications terminal as claimed in one
of the preceding claims,
characterized
in that the selection device (107; 207) is produced
5 within the context of menu guidance.

10. The telecommunications terminal as claimed in one
of the preceding claims,
characterized
10 in that the memory device (139) is in the form of a
multi-area memory for storing a plurality of strings of
digits in the memory areas (139i), which can each be
accessed using the actuation means.

15 11. The telecommunications terminal as claimed in one
of the preceding claims,
characterized
in that the transmission device has associated
encryption means (141) for encrypting the user-specific
20 data before and/or during transmission.

12. The telecommunications terminal as claimed in one
of the preceding claims,
characterized by
25 its being in the form of a mobile telephone (101; 200).

13. The telecommunications terminal as claimed in one
of the preceding claims,
characterized
30 in that the transmission device is designed to transmit
the user-specific data via an IP network, in particular
the Internet, and has a web browser, in particular.

14. The telecommunications terminal as claimed in one
35 of the preceding claims,
characterized
in that the input device (129) and/or the memory device
(139), in particular both, are held in a supplementary
module (103), which can be connected via an interface

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(105A, 105B) with data capability, for a telephone, in particular a mobile telephone, having a separate housing.

- 5 15. The telecommunications terminal as claimed in claim 14, characterized in that the supplementary module (103) has a digit or alphanumeric keypad (129) or a touch screen.

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Abstract

Telecommunications terminal

Telecommunications terminal (100) having a memory device (139) for storing user-specific data, having a transmission device (119 to 127) whose input is connected to a memory device, where the memory device and the transmission device are designed to store at least one string of digits and to transmit it while a connection exists, and authentication means (133 to 135) for protecting the user-specific data against unauthorized access are provided.

(Figure 1)

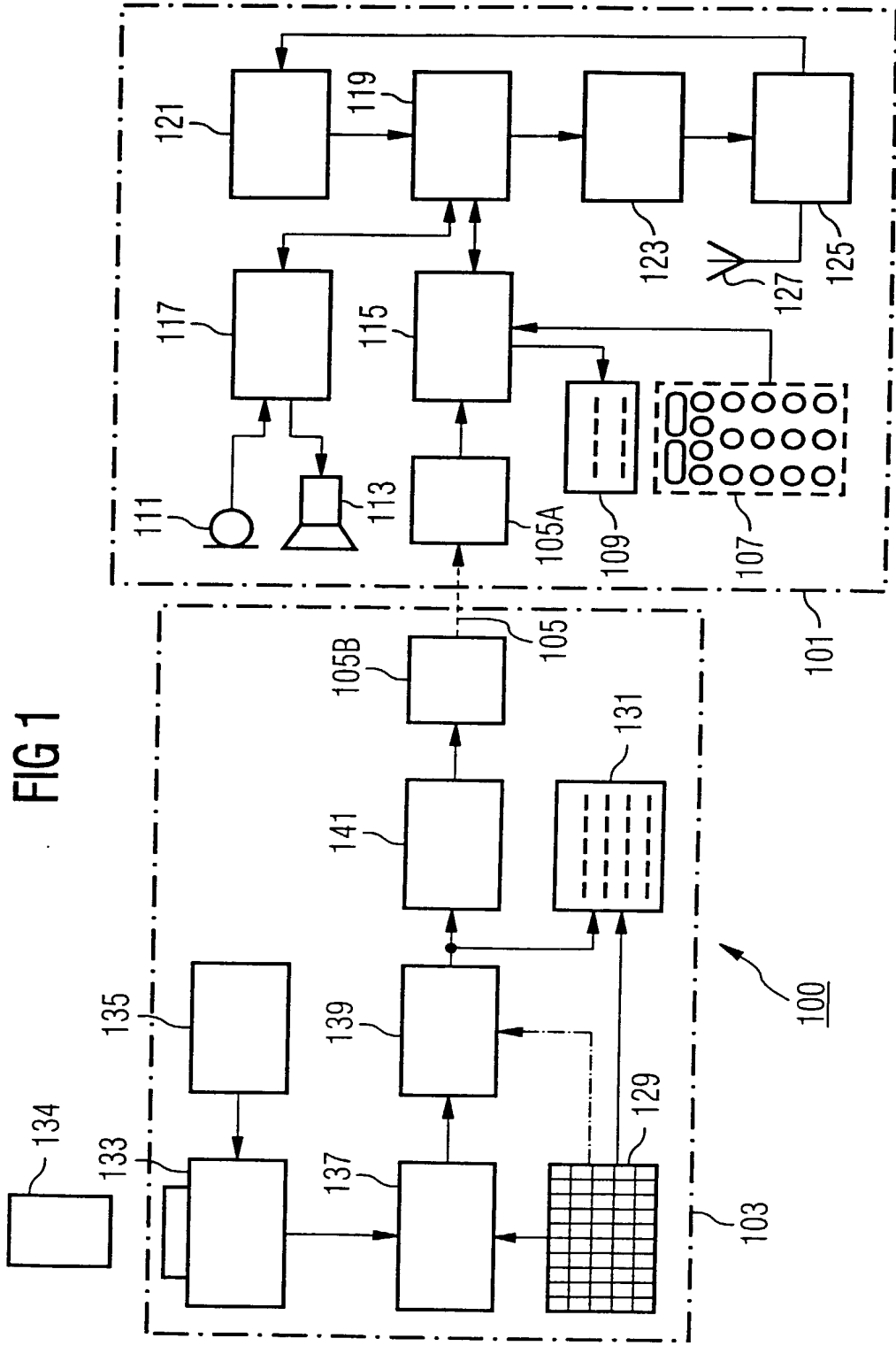
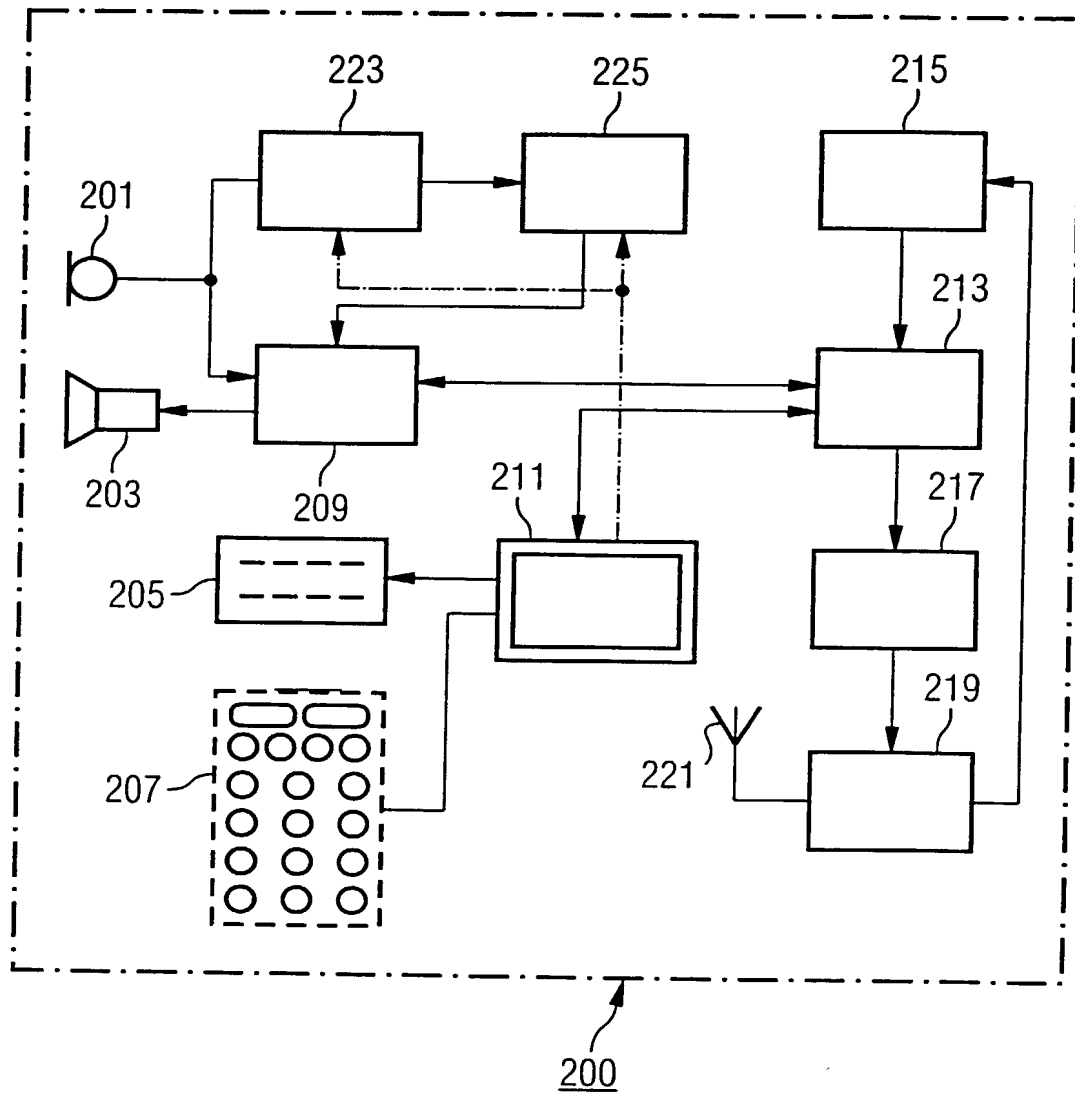


FIG 2



Declaration and Power of Attorney For Patent Application

Erklärung Für Patentanmeldungen Mit Vollmacht

German Language Declaration

Als nachstehend benannter Erfinder erkläre ich hiermit an Eides Statt.

As a below named inventor, I hereby declare that:

dass mein Wohnsitz, meine Postanschrift, und meine Staatsangehörigkeit den im Nachstehenden nach meinem Namen aufgeführten Angaben entsprechen,

My residence, post office address and citizenship are as stated below next to my name,

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I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

Telekommunikations-Endgerät

Telecommunications terminal

deren Beschreibung

the specification of which

(zutreffendes ankreuzen)

(check one)

☐ hier beigefügt ist

☐ is attached hereto.

☒ am 16.05.2000 als

☒ was filed on 16.05.2000 as

PCT internationale Anmeldung

PCT international application

PCT Anmeldungsnummer PCT/DE00/01546

PCT Application No PCT/DE00/01546

eingereicht wurde und am

and was amended on

abgeändert wurde (falls tatsächlich abgeändert).

(if applicable)

Ich bestätige hiermit, dass ich den Inhalt der obigen Patentanmeldung einschliesslich der Ansprüche durchgesehen und verstanden habe, die eventuell durch einen Zusatzantrag wie oben erwähnt abgeändert wurde.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims as amended by any amendment referred to above.

Ich erkenne meine Pflicht zur Offenbarung irgendwelcher Informationen, die für die Prüfung der vorliegenden Anmeldung in Einklang mit Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) von Wichtigkeit sind, an.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

Ich beanspruche hiermit ausländische Prioritätsvorteile gemäss Abschnitt 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 119 aller unten angegebenen Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde, und habe auch alle Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde nachstehend gekennzeichnet, die ein Anmeldedatum haben, das vor dem Anmeldedatum der Anmeldung liegt, für die Priorität beansprucht wird.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

German Language Declaration

Prior foreign applications
Priorität beansprucht

Priority Claimed

19940823.8

DE

27.08.1999

☒

☐

(Number)
(Nummer)

(Country)
(Land)

(Day Month Year Filed)
(Tag Monat Jahr eingereicht)

Yes
Ja

No
Nein

(Number)
(Nummer)

(Country)
(Land)

(Day Month Year Filed)
(Tag Monat Jahr eingereicht)

☐
Yes
Ja

☐
No
Nein

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Yes
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Ich beanspruche hiermit gemäss Absatz 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 120, den Vorzug aller unten aufgeführten Anmeldungen und falls der Gegenstand aus jedem Anspruch dieser Anmeldung nicht in einer früheren amerikanischen Patentanmeldung laut dem ersten Paragraphen des Absatzes 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 122 offenbart ist, erkenne ich gemäss Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) meine Pflicht zur Offenbarung von Informationen an, die zwischen dem Anmeldedatum der früheren Anmeldung und dem nationalen oder PCT internationalen Anmeldedatum dieser Anmeldung bekannt geworden sind.

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §122, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

PCT/DE00/01546
(Application Serial No.)
(Anmeldeseriennummer)

16.05.2000
(Filing Date D, M, Y)
(Anmeldedatum T, M, J)

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(patentiert, anhängig,
aufgegeben)

pending
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(patented, pending,
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(Application Serial No.)
(Anmeldeseriennummer)

(Filing Date D,M,Y)
(Anmeldedatum T, M, J)

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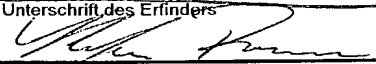
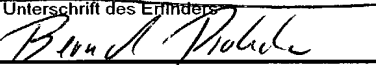
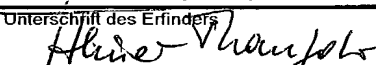
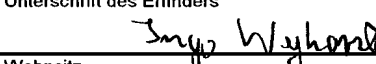
Send Correspondence to:

Morrison and Foerster LLP
2000 Pennsylvania Ave., NW 20006-1888 Washington, DC
Telephone: (001) 202 887 1500 and Facsimile (001) 202 887 0763
or
Customer No. 25227

| | |
|---|--|
| <p>Voller Name des einzigen oder ursprünglichen Erfinders: ALBRECHT GOECKE</p> | <p>Full name of sole or first inventor: ALBRECHT GOECKE</p> |
| <p>Unterschrift des Erfinders Datum 31.01.02</p> | <p>Inventor's signature Date</p> |
| <p>Wohnsitz MUENCHEN, DEUTSCHLAND DEX</p> | <p>Residence MUENCHEN, GERMANY</p> |
| <p>Staatsangehörigkeit DE</p> | <p>Citizenship DE</p> |
| <p>Postanschrift WHISTLERWEG 13 81479 MUENCHEN</p> | <p>Post Office Address WHISTLERWEG 13 81479 MUENCHEN</p> |
| <p>Voller Name des zweiten Miterfinders (falls zutreffend) STEPHAN MENTZ</p> | <p>Full name of second joint inventor, if any STEPHAN MENTZ</p> |
| <p>Unterschrift des Erfinders Datum 7.2.02</p> | <p>Second Inventor's signature Date</p> |
| <p>Wohnsitz ECHING, DEUTSCHLAND DEX</p> | <p>Residence ECHING, GERMANY</p> |
| <p>Staatsangehörigkeit DE</p> | <p>Citizenship DE</p> |
| <p>Postanschrift UHLANDSTR.27 85386 ECHING</p> | <p>Post Office Address UHLANDSTR.27 85386 ECHING</p> |

(Bitte entsprechende Informationen und Unterschriften im Falle von dritten und weiteren Miterfindern angeben).

(Supply similar information and signature for third and subsequent joint inventors).

| | | | |
|---|--------------------------|--|------|
| Voller Name des dritten Miterfinders: Dr. STEFAN PRANGE | | Full name of third joint inventor: Dr. STEFAN PRANGE | |
| Unterschrift des Erfinders  | Datum 13.02.02 | Inventor's signature | Date |
| Wohnsitz MUENCHEN, DEUTSCHLAND <i>DEX</i> | | Residence MUENCHEN, GERMANY | |
| Staatsangehörigkeit DE | | Citizenship DE | |
| Postanschrift FORSTENRIEDER ALLEE 134 | | Post Office Address FORSTENRIEDER ALLEE 134 | |
| 81476 MUENCHEN | | 81476 MUENCHEN | |
| Voller Name des vierten Miterfinders: BERND PROHASKA | | Full name of fourth joint inventor: BERND PROHASKA | |
| Unterschrift des Erfinders  | Datum 08.04.02 | Inventor's signature | Date |
| Wohnsitz RETTEBACH, DEUTSCHLAND <i>DEX</i> | | Residence RETTEBACH, GERMANY | |
| Staatsangehörigkeit DE | | Citizenship DE | |
| Postanschrift BRIEBERG 24 | | Post Office Address BRIEBERG 24 | |
| 93191 RETTEBACH | | 93191 RETTEBACH | |
| Voller Name des funften Miterfinders: HEINER THOMFOHRDE | | Full name of fifth joint inventor: HEINER THOMFOHRDE | |
| Unterschrift des Erfinders  | Datum 18.01.02 | Inventor's signature | Date |
| Wohnsitz UNTERSCHLEISSHEIM, DEUTSCHLAND <i>DEX</i> | | Residence UNTERSCHLEISSHEIM, GERMANY | |
| Staatsangehörigkeit DE | | Citizenship DE | |
| Postanschrift FASTLINGER RING 200 | | Post Office Address FASTLINGER RING 200 | |
| 85716 UNTERSCHLEISSHEIM | | 85716 UNTERSCHLEISSHEIM | |
| Voller Name des sechsten Miterfinders: INGO WEGHORST | | Full name of sixth joint inventor: INGO WEGHORST | |
| Unterschrift des Erfinders  | Datum 16.01.02 | Inventor's signature | Date |
| Wohnsitz MUENCHEN, DEUTSCHLAND <i>DEX</i> | | Residence MUENCHEN, GERMANY | |
| Staatsangehörigkeit DE | | Citizenship DE | |
| Postanschrift GOTTHELFSTR.55 | | Post Office Address GOTTHELFSTR.55 | |
| 81677 MUENCHEN | | 81677 MUENCHEN | |

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